Developing Tactical Commanders at CGSOC For the Future AirLand Battlefield

A Monograph
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First Term AY 90-91

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	04/01/91	MONOGRAPH

4. TITLE AND SUBTITLE
DEVELOPING TACTICAL COMMANDERS AT CGSOC FOR THE FUTURE AIRLAND BATTLEFIELD

5. FUNDING NUMBERS

6. AUTHOR(S)
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
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COM (913) 684-3437 AUTOVON 552-3437

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)
SEE ATTACHED

14. SUBJECT TERMS
COMMAND CONTROL; CYBERNETIC OPNS; TRAINING OFFICERS; AIRLAND BATTLE FUTURE; DECISION-MAKING

15. NUMBER OF PAGES
91

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNLIMITED

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SCHOOL OF ADVANCED MILITARY STUDIES

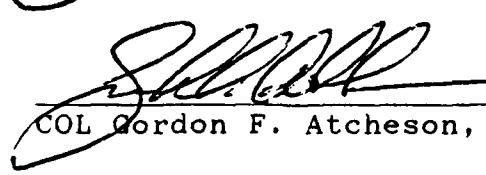
MONOGRAPH APPROVAL

Major Peter J. Palmer

Title of Monograph: DEVELOPING TACTICAL COMMANDERS AT CGSOC FOR THE FUTURE AIRLAND BATTLEFIELD.

Approved by:

COL Gordon F. Atcheson, M.A. — Monograph Director



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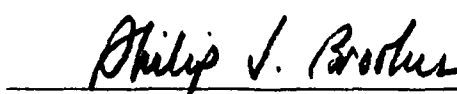

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Accepted this 11th day of February 1991

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This study examines the proposed 1991 CGSOC curriculum to determine if it is structured to educate and train future AirLand battlefield commanders. First, this paper develops a "Command Process Model" and uses theoretical and historical analysis to substantiate the validity of this model. The model was then used to provide analysis criteria for the conduct of a command curriculum needs assessment. This curriculum needs analysis focused on command requirements and current command problem areas. The curriculum needs analysis results were then compared against the proposed 1991-92 curriculum to determine possible curriculum shortcomings and discrepancies.

This study concludes that the components of the command process (vision, decision making, mission tactics, intent, main effort) are substantiated by theory and history. Airland Battle Future (ALB-F), senior Army leaders and current authors emphasize the importance of these same command components for the conduct of future battle operations. Senior leaders, the Combat Training Centers (CTCs) trends, contemporary authors, and current studies indicate that commanders are experiencing problems with these same command components. The proposed 1991-92 CGSOC does conduct limited education and training involving the command process components. However, this limited education and training does not fully address the future ALB command requirements identified in the command needs assessment in this study. For example, it does not emphasize command over control, command decision making exercises or commander analysis techniques.

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INTRODUCTION

> **Command is a dynamic process, involving the interaction of personalities with events as they unfold, and is therefore in itself the least susceptible to automation.**
>
> **Chris Bellamy --**
> **The Future of Land Warfare**[1]

The Army is undergoing an evolutionary change in its warfighting concepts for the future battlefield. The U.S. Army Training and Doctrine Command (TRADOC) is conducting studies to determine the Army's future wartime roles, structure and doctrine. These studies have led to the development of the AirLand Battle - Future (ALB-F) umbrella concept.[2]

At the tactical level, the ALB-F umbrella concept portrays a technologically advanced and highly automated battlefield. With this increase in technology comes an increase in weapons lethality, especially against linearly arrayed forces. To counter this increased lethality, future forces will be tailored to conduct predominantly offensive operations on a non-linear battlefield.[3]

More sophisticated automation will give future commanders the capability to exercise excessive control over all subordinate commanders. This increase in control does not necessarily guarantee battlefield effectiveness or success. Although control will be necessary to harmonize battlefield systems, only the subordinate commander's

freedom to make decisions and act upon them during the battle will ensure success.[4]

Therefore, the ALB-F umbrella concept emphasizes the need for more command and less control. This concept will require leaders who are well educated in their profession and in the precepts of a decentralized command philosophy.[5]

In conjunction with the TRADOC ALB-F development process, the Command and General Staff College (CGSC) is conducting a substantial review and revision of the Command and General Staff Officers Course (CGSOC) curriculum.[6] The content of this new curriculum is critical because it impacts on the education, and hence performance, of commanders on the future battlefield.

The purpose of this paper is to examine the proposed 1991-92 CGSOC curriculum and determine if it is designed to educate tactical leaders for command on the future AirLand battlefield. The scope of this study is limited to the analysis of the institutional pillar of leadership development because it is the "bedrock of leader development, particularly in times of peace."[7]

This paper is limited to CGSOC because it emphasizes the tactical battlefield command at the primary levels envisioned for the conduct of the non-linear battle (e.g. corps, division and brigade). Additionally, the current CGSOC curriculum is under revision and any substantive

findings from this study may assist in improving the final product. This revision process also limits the quantitative specificity to which each individual course could be examined in terms of specific hours, terminal learning objectives (TLOs), and enabling learning objectives (ELOs).

The study methodology of this paper initially develops a command process model. The command process model is then used as analysis criteria to conduct a command needs assessment. This needs assessment will determine future command requirements and identify current command problem areas. The command process model and the results from the needs assessment are then used to identify shortfalls and discrepancies within the CGSOC curriculum.[3] Conclusions and implications are then drawn from the differences between the needs assessment and the proposed curriculum.

II. COMMAND AND THE COMMAND PROCESS MODEL (ANALYSIS CRITERIA)

> To become both wise and courageous one must acquire a method, a method to be employed in learning as well as in applying what has been learned.
>
> - Mao Tse-Tung[9]

What is command? Theorists, historians, and doctrine writers have developed as many different definitions for command as there have been great commanders. Additionally, discussions involving command quickly blend with discussions involving leaders, leadership, and management. Command has even merged with control to form one term: "command and control." According to some authors these terms are synonymous, and trying to differentiate between them is an unnecessary drill in semantics.

Although one could agree that these terms are related, they are not synonymous. From a purely academic point of view, delineations in the meanings of command and control are necessary to properly construct the analysis criteria.

This section differentiates between these terms and will develop and validate a command process model that serves as an analysis criterion for the remaining sections of the paper. This delineation process includes a review and discussion of current definitions and development of the command process model. Validation of this model is based on a review of current doctrine and a review of

military theory and historical writings. To begin the validation process it is first necessary to adequately differentiate between a leader and a commander.

What is a leader versus what is a commander? According to the dictionary, a leader is [first definition], "a person who leads others along a way; a guide. [or second definition] one in charge or in command of others...."[10] A commander is: "A person who commands; [or is a] leader...."[11]

Although there is not a clear difference between the two definitions, a hierarchical relationship appears to exist based on the second leader definition. In short, all commanders are leaders but not all leaders are commanders. For example, a staff officer is a leader but he is not a commander.

Another delineation includes the legal aspects of command. In the military, a commander has official Uniform Code of Military Justice (UCMJ) authority, while a leader, such as a staff officer, does not. This legalistic aspect is important because anyone can make a decision; only a commander has the legal authority to ensure that his decisions are executed.

What is the difference between command, leadership, management, and control? Field Manual (FM) 22-103, Leadership and Command at Senior Levels establishes a model of leadership and command that defines and addresses these

terms. The model itself includes: the "leader's vision;" "characteristics important to effective senior leadership" (organization, challenge, ethics, skills and process) and "what senior leaders and commanders do to execute their vision."[12] The terms command, control, leadership and management are part of the "process characteristics" of the leadership and command model. The FM differentiates these processes as follows:

> Command: "...the primary means whereby vision is imparted to the organization. From a command perspective, the element of analysis is the organization. The senior professional's primary focus shifts from individual units and soldiers to issues which affect everyone -- from detailed problem solving to synthesis and integration."[13]
>
> Control: "...is a process used to establish limits and provide structure...its purpose is to deal with the uncertainties inherent in organizational operations. As a process its effect is to serve primarily as a compensating, correcting device for command."[14]
>
> Leadership: "...the art of direct and indirect influence and the skill of creating the conditions for sustained organizational success to achieve the desired result."[15] "...leadership deals with the interpersonal relationships between the leader and the led."[16]
>
> Management: "...focuses primarily on the conceptual aspects of behavior in activities such as planning, organizing, or budgeting...[it] is a set of activities or behaviors performed by those in senior positions to acquire, direct, integrate, or allocate resources to accomplish goals and tasks...."[17]

Based on these definitions, the difference between command and the other processes is significant. The processes of control, leadership, and management occur after

the vision of the organization has been established by the leader and then communicated to the organization through the command process. The leader serving in the capacity of the commander must develop his vision, communicate it to the organization, and then achieve his vision using the control, leadership, and management processes.

The concept that command is a process is significant in that a process by definition consists of a "series of actions, changes, or functions that bring about an end or result."[18] Proper identification of the command process components could therefore form the basis of a command educational curriculum, program, or course. These components could also serve as analysis criteria for the review of an established or proposed curriculum.

What are the command process steps? FM 22-103 does not include a discussion of the steps of the command process. Additionally, a review of doctrine and military writings, both past and current, does not reveal a step by step command process. The closest comparison to a command process is the military "decision making process model."[19]

There is no specific doctrinal discussion concerning the steps involved in the command process; therefore, the author developed the following command process model to address this shortfall. This model is specifically limited to the tactical command process. [Note: a discussion of an expanded version of this model is in Appendix A.]

TACTICAL COMMAND PROCESS MODEL

STEP 1:	Initiation	Mission
	Communication Filter	
STEP 2:	Analysis	Vision Formulation
STEP 3:	Decision	Commanders' Guidance & Decisions with output in the form of - Intent (vision) - Mission Orders (Freedom of action) - Main Effort (Responsibility)
	Communication Filter	
STEP 4:	Cybernetic Operations[20] (Control Operations)	Control Process Leadership Process Management Process Feedback Process

The validity of this model is based on two assertions: the model is doctrinally sound and the model components are supported by historical and theoretical analysis. The validation process for this model follows:

Doctrinal Validation

FM 100-5, Operations is the keystone manual that outlines the U.S. Army's warfighting doctrine and philosophy.[21] In its section on "Command and Control," the manual describes many of the command model's components:

> Plans are the initial basis of action... Ideally, the initial plan for an operation will establish the commander's intent and concept of operations and the responsibilities of subordinate units. It will, however, leave the greatest possible operational and tactical freedom to subordinate leaders...Commanders should restrict the

> operations of their subordinates as little as necessary. Mission orders that specify what must be done without prescribing how...Control measures should secure cooperation between forces without imposing unnecessary restrictions on the freedom of junior leaders.[22]

However, FM 100-5 does not specifically differentiate between command and control concepts.

In a Military Review article entitled "Command," the current TRADOC Commander, GEN Foss, differentiates between command and control. In this article, he identifies three command precepts: "commander's intent (vision), mission tactics (freedom of action) and priority of main effort (responsibility)."[23] These three precepts become the foundation of steps two and three of the command model.

GEN Foss also addresses the hierarchical relationship between command and the other leader processes.

> We often send our subordinates conflicting signals --in how we act, what we say, or even what we call things. When we say 'C4,' we tend to place all parts of command, control, communications and computers on an equal basis. However, we all know that control, communications and computers are subordinate to, and support, command.[24]

The model's use of these command precepts and hierarchical design aligns the model with the command philosophy of the Army's senior trainer.

The above discussions concerning command and control do more than validate a few steps in the command model. They establish the command philosophy deemed necessary to execute ALB's and ALB-F's theory of maneuver warfare.[25]

Further model validation comes from FM 22-103 and its

leadership model. This model's framework and discussions formed the basis for the development of several of the command process model components. The FM fully discusses the concept of vision development.[26] It also addresses the concept of command decision making.[27] As discussed earlier, FM 22-103 also defines and includes discussions concerning control, leadership, and management processes.[28]

The command process model also interfaces with the decision making process model. Although the steps do not sequentially pair up, the command process model addresses each of the six components of the decision making process model. For example, mission received corresponds with step one, mission; information to staff corresponds with step three, commander's guidance; and mission analysis corresponds with step two, analysis.

The previous discussion validates my assertion that the model is tied to current doctrinal concepts. It is entirely possible, however, that our current doctrinal concepts, and more importantly, the command precepts, may be invalid. This possibility requires a short theoretical and historical analysis of the command components.

Theoretical and Historical Validation

During my research of theoretical and historical writings, I did not identify a model similar to the one

presented in this study. Two authors, Richard Simpkin in Race to the Swift and Martin van Creveld in Fighting Power, address different components of this study's model, but neither develops a complete command process model.[29] Therefore, verification of this study's command model will be able to address only the individual components and not the model as a whole.

The analysis will focus primarily on Steps Two (Analysis) and Three (Decision) which encompass the main command related components. Step One (Initiation) is simply the recognition that some action or event will trigger the start of the command process and therefore should not require theoretical verification. Step Four (Cybernetic [Control] Operations) is an integral part of the command process, but it is focused on control related processes and will not be analyzed as part of this study. Therefore, the validation process will begin with Step Two.

Step Two: Analysis. Analysis by itself may not be peculiar to command, but analysis that forms the vision which shapes the goals of the organization is clearly a command step. The concept of command analysis is well supported in theoretical writings. For example, Clauzewitz's discussion on coup d'oeil (inward eye) conveys the concept of command vision, while it also alludes to the battlefield analysis that a commander must make given multiple inputs of information.[30] Clausewitz later spe-

cifically discusses the aspects of analysis to form vision:

> What [command] requires in the way of higher intellectual gifts is...a power of judgement raised to a marvelous pitch of vision, which easily grasps and dismisses a thousand remote possibilities which an ordinary mind would labor to identify and wear itself out in so doing.[31]

Sun Tzu's discussions, in his Art of War, also recognize the analysis aspect of command.

> By command I mean the general's qualities of wisdom sincerity, humanity, courage, and strictness...[a wise commander] is able to recognize changing circumstances and to act expediently.[32]

In My Reveries Upon the Art of War, Maurice de Saxe outlines his qualities of "the general commanding:"

> He should be endowed with the capacity of being prepared for everything, with activity accompanied by judgment, with skill to make a proper decision on all occasions, and with exactness of discernment.[33]

A final less obvious type of analysis is the German concept of Fingerspitzengefuehl.

> Translated literally, it means 'fingertipfeeling.' The idea it conveys, however, is that of an instinctive sixth-sense of terrain and tactics-a masterful touch in the art of war.[34]

This intuitive analysis aspect is viewed as the preeminent characteristic of the successful commander. Clausewitz also captures this intuitive analysis concept in his discussion of the commanders "inward eye."[35]

In summary, there is substantial theoretical support concerning the necessity of analysis to form a commander's vision. This vision may be formed based on intellect or a commander's own sixth-sense. Regardless of the method, a

commander must conduct analysis and formulate his vision before he can make a decision.

Step Three: Decision making. Final decision making authority and responsibility ultimately falls on the commander. By making a decision, the commander imparts his vision and focuses his organization towards the preparation of the ways and means of achieving this vision.

This concept of decision making is also supported by theoretical writings. Both Sun Tzu's and De Saxe's quotations above address the aspect of command decision making. However, Clausewitz's discussions on the "military genius" epitomizes the importance of command decision making. Tying the quality of coup d'oeil to the second quality of military genius and determination, Clausewitz states:

> Some may bring the keenest brains to the most formidable problems, and may possess the courage to accept serious responsibilities; but when faced with a difficult situation they still find themselves unable to reach a decision.[36]

From a more current historical perspective, Generaloberst Lothar Rendulic in his 1947 article "The Command Decision" stated:

> The most difficult but also most crucial part of commander's varied duties is the making of a decision.... The decision represents the culmination of a series of thoughts which the mind has turned over for longer or shorter periods of time. Again, it may be borne in a split second. The decision always reflects the will of the commander. (emphasis in original)[37]

The second portion of Rendulic's statement also illustrates the link between the analysis and decision steps in the

command process model.

The importance of decision making is further subtantiated in Infantry in Battle which states: " A leader must meet battle situations with timely and unequivocal decisions."[38] The validity of the decision is not the only critical aspect of this command process step.

Critical to this model is the validity of the decision outputs: intent (vision), mission orders (freedom of action), and priority of main effort (responsibility). Since specific decisions cannot be listed for every situation, these terms serve as generic categories of essential information that a commander should provide his subordinates to allow them to proceed to the cybernetic step.

The historical verification of these terms (intent, mission orders, and main effort) is based on the U.S. Army's acceptance of the German doctrinal concepts of command in maneuver warfare. Intent is based on the concept of vision that has roots which go back to Clausezwitz. The concept of vision has been discussed and validated above. However, once a commander determines his vision, he must convey it in some manner to initiate the cybernetic processes. Intent has become the accepted term to describe the product of the commander's vision and appears in paragraph three of our current operations order.

The term, intent, is also specifically mentioned in the 1933 German doctrinal manual Truppenfuhrung (troop-

leading).[39] For example, Truppenfuhrung specifically states: "The general intention is expressed, the end to be achieved is stressed."[40]

Mission orders are derived from the German concept entitled Auftragstaktik or mission-type orders.[41] The underlying aspect of Auftragstaktik and mission orders is the concept of freedom of action and maintenance of the aim (intent). The whole purpose of mission-orders is to allow subordinate commanders the latitude to operate in the fog and friction of war. In Race to the Swift, Simpkin also addresses the concepts of freedom of action, mission-orders, and Auftragstaktik. He emphasizes that his command parameters for maneuver warfare must include these concepts.[42]

The designation of the main effort or designation of responsibility is the last term to be verified in the decision step. It relates to Clausewitz's term "center of gravity" and the German term entitled Schwerpunkt (main point, center of gravity or point of decision). During the analysis process, the commander must identify the enemy's center of gravity and the decisive points that can influence the center of gravity. As part of his vision, he arrays his forces to attack these decisive points.

Designation of the main effort is the commander's output product that addresses this aspect. By designating

the main effort, the commander not only focuses the unit on what he perceives are the enemy's decisive points, but the main effort also establishes the appropriate responsibility of each subordinate commander. This delineation of responsibilities to subordinates, in conjunction with mission-orders and commander's intent, further establishes the latitude in which the subordinate commanders should operate. The additional aspects of responsibility and its relation to the main effort are also historically supported by the 1936 Truppenfuhrung:

> The mission consists of the objective to be attained. The person responsible for it should never leave it from his sight. A mission consisting of many parts easily diverts attention from the main purpose.[13]

This responsibility applies to all units, not just those assigned as the main effort. Units that are not assigned as the main effort still incur the responsibility to support the main effort unit in accomplishing its mission.

In conclusion, the separate elements of the command decision model appear to be well supported by doctrine, theory and historical analysis. This study will now use this validated model to perform a command needs assessment and to analyze the proposed CGSOC curriculum.

III. COMMAND NEEDS ASSESSMENT

> In the next war, the price of failure will be very high and the margin for error will grow smaller....At a time when technology and electronic devices appear to offer an easy path to overcome the complexities of modern battle, the Army must empower commanders, embrace the mission-tactics and use technology to assist--not take over--the art of command.
>
> General Foss -- TRADOC Commander[44]

The development of the command related portion of the educational curriculum in CGSOC should be based on the needs of future commanders. This section identifies those needs. The identification process is divided in two areas: future command requirements and current command problems. The tactical command process model will form the basis of all needs identification and assessment for both areas.

FUTURE COMMAND REQUIREMENTS

ALB-F documents and the views and guidance of senior Army officers were used to identify future ALB command requirements. The needs assessment will begin by analyzing current ALB-F documents.

ALB-F Documents: The "ALB-F Umbrella Concept" outlines the current vision for ALB-F. This concept specifically addresses four command related areas: command and control (C2) requirements, leader requirements, training requirements, and institutional impacts.

ALB-F envisions "effective C2 [as] the cornerstone of

superior execution...and the commander is the key to good C2."[45] More importantly, ALB-F emphasizes that there must be "more command and less control" to execute effectively this future doctrine.[46]

ALB-F argues that future commanders must "rapidly assess the battlefield situation, visualize windows of opportunity and successfully synchronize and sequence combat power."[47] This battlefield orchestration of events will only be successful in a command environment that embraces "mission-oriented command and control."[48] The decentralized nature of the future battlefield will require commanders who "express [their] intent clearly and [a] staff [that operates] with determined initiative within that intent."[49] These requirements are reiterated in the ALB-F's concept discussion on leadership development.[50]

ALB-F also outlines several commander training requirements. Initially, "the Army must develop a training concept or plan to complement the ALB-F Umbrella Concept."[51] Additionally, ALB-F requires the training of commanders to improve command and control with more classroom instruction in the new technologies.[52] Finally, ALB-F advocates "improv[ing] our training capabilities in order to produce innovative leaders who can use initiative within the scope of the higher commander's intent."[53]

A second document, CGSC ALB-F concept briefing, specifically identified the need for institutions to "review

structure and content of all courses."[54] However, the same briefing stated that there would be no immediate effect on the current leader development process. It envisioned the three pillars of "institutional training, operational assignments, and self-development [as] evolv-[ing] with doctrine and technology," and not through any specialized program or new instructional methods.[55]

In summary, current documents identify numerous future command requirements. The next step in this analysis will be to discuss what senior officers identify as future command requirements.

Senior Officer Views and Guidance: GEN Vuono's White Paper on "A Strategic Force for the 1990's and Beyond" discusses six Army imperatives. His sixth imperative, "Leader Development", recognizes that "leader development...is our most important and lasting contribution to shaping the Army of the future."[56]

In an interview with GEN Foss, he discussed what he believes are the basic requirements necessary to command on the future AirLand Battlefield. First, the commander must establish a command philosophy that encourages "mission-tactics," both in combat and in peacetime.[57] Such tactics, he believes, produce decisive commanders who exercise battlefield initiative.[58]

Second, a commander must understand his superior's intent. Intent outlines the overall purpose of the opera-

tion. When a specified task no longer achieves the desired overall purpose, subordinate commanders can adjust or change specified tasks based on the intent parameters and the changing situation.[59] As part of the command process, GEN Foss says "it is especially important that the commander, not the operations officer (S3/G3/J3), personally articulate the commander's intent portion of the order."[60]

Third, ALB-F requires that commanders must understand the responsibility inherent with the designation of the main effort. Everything a subordinate commander does must support the main effort. He must recognize an opportunity to achieve the overall intent by taking the initiative when the main effort fails or when an opportunity presents itself. This command quality requires vision and the ability to make a decision within the context of the overall intent of the operation.[61]

Finally, ALB-F will require commanders who understand the authority of command. "A commander and his subordinates need to feel this authority."[62] A former German Eastern front commander, General Lothar Rendulic reinforces this view of authority in his 1947 article "The Command Decision." After his senior commander let him decide whether or not to withdraw, General Rendulic states:

> One fact, though, became clear to me: not easy to begin with, my decision became much more difficult upon the authorization given me. The above-mentioned experience taught me that a superior...must never unload part of his own responsibility on [his subordinate].[63]

Authority can also play a positive role. GEN Foss said: "When things don't happen, commanders need to apply authority and make [things] happen."[64]

Lieutenant General (LTG) Leonard Wishart, the Commander of the Combined Arms Command (CAC) and Commandant of CGSC, reinforced GEN Foss's discussion emphasizing command over control. Additionally, LTG Wishart identified five key decisions a commander needs to make. These decisions included the following: "Mission...the commander defines (and approves) the mission, Task Organization, Prioritization of Combat Support (CS), Prioritization of Combat Service Support (CSS), and Battlefield Geometry--summation of the other four plus intent and overall concept."[65]

LTG Wishart identified additional command requirements in "Leader Development and Command and Control" published in Military Review. LTG Wishart stated:

> Leader development depends heavily on...A positive environment, which ensures that subordinates know the commander's intent and standards and feel free to exercise delegated authority....[66]
>
> [Additionally]...Commanders must improve the synchronization of combat power in order to be successful. Commanders at all echelons must speak in a common doctrinal context and use common terms in order to provide a clear understanding of intent and concept. Execution must be decentralized, but consistent with the higher commander's intent.
>
> The analysis and decision-making process must be accelerated so leaders at all echelons can make the right decisions in a timely manner. Commanders must be able to project and anticipate in order to seize the initiative, and their staffs must have decision aids and situation assessment systems that will enable them to accurately "see the battlefield" in real or near-real time.[67]

BG John Miller, Deputy Commandant CGSC, also identified several requirements necessary for the future commander.

> The art of command includes the commander's ability to understand the situation, envision and endstate, give appropriate direction towards endstate achievement and be able to draw from the talents within himself, subordinates, bosses and his staff that contribute to mission accomplishment.[68]

In summary, ALB-F discussions and senior Army leaders have identified requirements that emphasize command over control (decentralized execution); the necessity for commanders who can quickly identify, analyze, decide, and express their decisions in terms of intent, mission orders and main effort; and commanders who can synchronize and sequence their unit's actions in the overall concept of the higher commander's intent. Additionally, units and institutions must develop programs and curriculums that support the attainment of these requirements.

CURRENT COMMAND PROBLEM AREAS

This portion of the needs assessment will identify current command problem areas. These command problem areas were identified using four sources: senior commanders' perceptions, current authors, studies, and Combat Training Centers (CTC) lessons learned data. Analysis of these sources follow:

Senior Commander Perceptions of Current Command Problems.

Both GEN Foss and LTG Wishart recognize problems in

how command is currently exercised. A review of GEN Foss's comments is sufficient to outline the problem areas perceived by both generals.[69] In an interview, GEN Foss identified his perceptions of the greatest problem facing commanders on the future battlefield:

> The Army is trapped into a mechanical system that does not provide the environment necessary to execute mission-tactics. Additionally, automation and increased technology will only encourage control over command.[70]

GEN Foss says many commanders are task oriented and therefore fail to look beyond the immediate task and operate in the commander's vision or intent, understand their role in the support of the main effort and know when to use their command authority to influence the action.[71]

BG Miller also identifies that commanders "can't envision or describe the endstates to be achieved. When they need to be prioritized, commanders do not know how to state priority one is..., priority two is... Their tendency is to retain ambiguous stands."[72] Having established that we have problems in the exercise of command in the view of senior generals responsible for educating future leaders, we will now look at additional evidence from current studies and application in the field.

Current Authors and Studies Identified Command Problems.

Several authors have addressed command process model components. In their book, Leadership on the Future Battlefield, James Hunt and John Blair identified the same

major command problem areas as GEN Foss. Speaking of a decentralized command philosophy, they state: "Current Army culture does not develop [decentralized] leadership skills."[73] Additionally, they argue:

> The environment of the [U.S.] military at peace...generates pressure for centralization of decision making to effect organizational control and to ensure performance consistent with policy and doctrine....During war, predictability of unit behavior is critical for implementing high-level strategies. Again there are pressures for centralization of decision making to ensure control. The growing capability and sophistication of computer information systems and increased capabilities of command, control and communications (C3) systems probably promote centralization...[74]

In his article for Military Review entitled "Command or Control?", Major Daniel Bolger discussed several problems that he perceived currently impact on command. First, he argued that our current system is "unable to guarantee leaders of great genius for our forces, [so it puts] a premium on precise control of our forces through timely acquisition and exploitation of information."[75] He then argued that "regardless of doctrinal pleas to the contrary, our Army has become infatuated with the promise of absolute control."[76]

Major Bolger's other arguments center around oversized staffs that "...horn in on decision making."[77] He argued that excess staff coordination translates into decision making, that current commanders often command by committee and that "the staff holds the commander hostage to the [staff] process."[78]

Major John Johnson, a former observer controller at the National Training Center, conducted a masters thesis study involving mission orders. This study identified the following problems involving the understanding and use of mission orders:

1st: The U.S. Army does not have an effective doctrine for the formulation and communication of mission orders at the tactical level.[79]

2nd: U.S. Army officers [do not] have a common understanding of the definition of mission.[80]

3rd: Only 20% of the officers surveyed know the characteristics of mission orders as expressed in their doctrine[81]

4th: Although only 20% know the characteristics, the perception is that a majority of "Army officers practice the use of mission orders.[82]

5th: 60% of the CGSC students surveyed felt that the formal education system teaches the use of mission orders.[83] [Only 20% know the characteristics, so how do they know if it is really being taught?]

Finally, a study conducted by Major William Crain, entitled The Mission: The Dilemma of Specified Task and Implied Commander's Intent, identified the following problem areas involving mission and intent:

1. Frequent use of incomplete mission statements.
2. Lack of clarity in expressing commander's intent.
3. A predominant focus on task accomplishment.
4. Intent expression diminishes at lower levels.
5. Confusion with the terms operation, task and purpose.[84]

Combat Training Centers (CTC).

Because the CTCs provide training environments that best replicate combat, they tend to be the focus of numerous studies. These studies attempt to determine lessons learned that could be applicable to combat. Consequently, CTC identified command problem areas could be instrumental

in shaping future educational programs.

Initiation Problem Areas: The concept of an initiating step in the command process should be apparent; however, recognizing when the process should be initiated is not as clear. For example, time management is normally a problem at all the CTCs.[85] One cause of this problem is the failure to begin the command and staff planning process until after the receipt of a complete order.[86] These processes could have begun upon receipt of the warning order.

The initiation step of the command process is often slowed or never executed due to a commander's failure to grasp the changing battlefield situation. The fog and friction of battle are often leading reasons in this failure. For example, a common problem is the large amount of often incomplete, inaccurate, and untimely information given to the commander from the staff and subordinate commanders.[87]

A major reason for problems in the initiation step is a commander's failure to recognize a change in the situation which calls for the process to begin again. If a commander does not recognize the need to re-initiate the process, then he will never be able to perform the next step--analysis and vision formulation.

Analysis Problems: Critical to this process is the commander's analysis and visualization of the battlefield. In an annual lessons learned bulletin, the Center for Army

Lessons Learned (CALL) addressed commanders' visualization as a major problem:

> Some commanders have difficulty in 'seeing' or visualizing the battlefield. Without a clear mental image of what is occurring in his zone or sector, a commander finds it impossible to synchronize the employment of the combat multipliers at his disposal.[88]

During the analysis process, a commander is presented with a large amount of data often in the form of information tools (e.g., decision support template, status charts, decision matrices) Not all commanders fully understand the methods and information available from these tools. Consequently, they are often either overcome with information or they ignore critical components.[89] Additionally, "commanders tend to rely too much on the staff's input that may or may not be in line with his original guidance."[90] Staffs also make decisions about what is or is not important enough for the commander to know, thus possibly degrading the commander's vision making process.

Decision Making Problems: The greatest decision making problem identified by the CTCs is the commander's failure to make timely decisions.[91] There are several reasons for this problem. The most serious is addressed in GEN Foss's discussion involving the command philosophy. A CTC rotation is often perceived as a possible threat to a commander's career (note: this view appears to be changing).[92] Because of this perception, commanders approach the exercise with a must win mentality. Norman

Dixon, in On the Psychology of Military Incompetence, discusses this point:

> ...failure rather than hope of success tends to be the dominant motive force in decision-making and the higher the rank the stronger this motive because there is farther to fall.[93]

A second command decision problem is the failure of commanders to make a decision. In the search for the perfect decision, commanders often "command by committee" and attempt to "develop the perfect plan."[94] Major Bolger states the problem in a slightly different way "[The commander] must participate in this affair [planning process] playing the role of a contestant in a tactical version of 'Let's Make a Deal.'"[95]

This failure to make a decision is seen as a major problem during the execution phase as well. For example, many commanders accurately plan decision points for commitment of the reserve. However, when that decision point is reached, commanders often hesitate to make a decision until it is too late. As some observer controllers (O/Cs) say, "No decision is a decision."[96]

There are also problems with the outputs of the command decision process. Training trends at the NTC show that communication of intent is a major problem.[97] COL Carl Ernst, Battle Command Training Program (BCTP) commander, states that "Commanders do not understand intent and therefore, tend to convey a lot of concept and not the purpose for the mission."[98] Many times the staff, not the

commander, prepares the intent statement and, in some cases, also presents it.[99] "Many times the commander's intent statement is nothing more than a 'cheerleader's' list of adjectives."[100] Commanders are having problems formulating and effectively communicating their intent.

The commander's use of mission orders is also a problem area. "Commanders emphasize control over command."[101] Additionally, commanders sometimes go to the other extreme and issue broad "what" statements, without understanding that mission orders also include a purpose and as much additional guidance as may be necessary to ensure full understanding of the mission. During the execution phase, this problem leads to excessive use of the radio by the commander in an attempt to gain control over subordinate commanders who are not performing as the commander envisioned. This failure by subordinate commanders to act independently and in line with the commanders vision was propagated by their failure to fully understand their role in the overall mission.[102]

Although designating the main effort in the offense is normally not a major problem, it is a major problem in the defense, according to BCTP.[103] Even when the main effort is designated, commanders fail to adequately weight it. Instead, they create a grouping of "co-equal subordinate command 'Barons'."[104] Consequently, subordinate commanders fail to understand their role in relation to the main

effort. Their force is the same size so they perceive that their mission is as important as that of the main effort.

Cybernetic (Control) Problems: The CTCs outline numerous cybernetic problems that hinder the commander's ability to synchronize the battlefield operating systems. While these problems are important, few are appropriate to the purpose of this study.

Communication Filter Problems: This area has a significant effect on the command process. NTC O/C comments identify numerous cases where subordinates fail to understand their mission or the commander's intent due to communication failures.[105] Problems in the moral domain of battle (combat, fear, fatigue, stress) affect interpersonal communication failures just as equipment failures cause electrical communication problems. Also identified as problem areas were the unit's lack of understanding of doctrine, common terminology, and unit SOPs.[106]

In summary, senior Army commanders, current authors, studies, and CTC lessons learned data identify numerous problems in all steps of the command process. More importantly, these problems exist in areas that have been identified as command requirements for the future battlefield. This study will now examine the proposed curriculum to determine if it addresses these requirements and problem areas.

IV. CGSOC CURRICULUM ANALYSIS

> We are now socializing the future commanders, they are already in uniform. We must be sure they will have the capacity to meet the future challenge.
>
> --James Hunt and John Blair
> Leadership on the Future Battlefield[107]

Introduction.

As mentioned in the needs assessment section of this paper, the ALB-F briefing identified that institutions were directed to "review structure and content of all courses."[108] BG Miller directed a revision of the 1991-92 CGSOC curriculum using the guidance provided by GEN Vuono's white paper.[109] This guidance did not specifically emphasize or prioritize command education or training, although it did emphasize leader development. The review is being conducted in four phases:

> (1) A vision forming process to determine how CGSOC could best educate and train officers for the Army of the future. [needs analysis]
> (2) A review and revision of CGSC and CGSOC missions and goals.
> (3) A comprehensive curriculum review to determine its relevancy to a changing world.
> (4) A design phase to integrate curriculum content and structure.[110]

The revised core curriculum design is based on an integrated six block concept "with each block building on preceding instruction."[111] The first four blocks will focus on the "foundations of military operations to conducting operations at the division and corps level."[112] The remaining two blocks will focus on "the conduct of

joint operations from a theater perspective, low intensity conflict, and other special military topics."[113] (Further discussion concerning each block is in Appendix B.)

The revised course will also include a capstone exercise that focuses on the corps tactical level of warfare. The exercise will employ "BCTP-type, automation-supported simulation."[114] Most students will role-play coordinating or special staff officers and some will role-play corps and division commanders.[115]

Research of the core courses and the capstone exercise was limited to the current progress in curriculum development. Specific courses, content, hours per course, terminal learning objectives (TLOs), and enabling learning objectives (ELOs) were evolving and changing during the conduct of research for this paper. Therefore, the analysis of the curriculum could not be based on their evaluation. Instead, the analysis was based on extensive interviews with department directors, block coordinators, and some course authors. The interview process focused on obtaining the block coordinator's vision of each block's emphasis, purpose and methods of instruction as they relate to the command process model. Therefore, the conclusions are based on subjective analysis of responses from personnel responsible for developing the 1991-92 curriculum.

CURRICULUM ANALYSIS

General Conclusions. The proposed 1991-92 CGSOC curriculum does not make a major change in command education or emphasis. The focus of the course is still on educating and training leaders primarily in staff officer roles. Although there is leader, leadership development, and general command knowledge discussion in some courses, there is no specific emphasis for educating or training the process or the art of command.[116]

There is a special emphasis in the proposed curriculum content on historical analysis of past commanders, staffs and unit actions in combat. Leader philosophy education does occur as part of the senior level leadership courses. The emphasis is on organizational leaders and leadership, not specifically on command and the command process in a tactical scenario.[117]

Command Process Model Analysis Conclusions.

Step I: Initiation. This step is not specifically addressed as a separate step in any proposed course. It is assumed to occur based on the issuance of an order or requirement from an instructor (e.g. INTSUMs, SITREPs).[118] Because there is no command role-playing by the student, initiation is viewed from a staff officer's perspective. In addition, the initiation process for the staff normally occurs upon receipt of the commander's guidance. This is

performed by the instructor. This means that the initiation of the command process is not conducted or recognized by the students (i.e., the commander normally receives the mission, conducts an analysis and then issues the staff commander's guidance).

Step II: Analyze (vision formulation). The proposed curriculum heavily emphasizes this step. There are numerous proposed TLOs and ELOs that address this process. Leadership courses specifically address vision doctrine from an organizational perspective on the knowledge and comprehensive categories of the cognitive domain and effective domain of the Bloom's taxonomy.[119] Historical examples are also used to reinforce the analysis process step.

Since the analysis process is taught at the cognitive level, students are provided with data that is basically complete and with sufficient time to conduct the analysis process. This type training is just the opposite of that advocated by then COL George C. Marshall when he was the assistant commandant at the Infantry School. Marshall preferred to give the students limited information and time to force them to analyze and decide under conditions of stress and uncertainty.[120]

Another curriculum problem relates to the institution's instructional focus from a staff versus a commander perspective. The majority of tactical education and training for this step focuses on the staff perspective and

requirements. Although the analysis process and use of analysis tools (e.g., IPB, DST, matrices) are applicable to both the staff and command analysis processes, the difference in focus is significant.

This staff analysis focus never teaches or trains a student to conduct a comprehensive analysis involving all factors. For example, students role-play as different staff officers. The S2/G2 focuses his analysis on intelligence, the S4/G4 on logistics, the S3/G3 on maneuver, the FSCOORD on fire support. No student is required to conduct an analysis of all these staff inputs and factors. Therefore, the students are never specifically taught how to conduct a comprehensive battlefield analysis.

Additionally, when viewed through a staff officer's perspective, the analysis process and tools become more than a means of analysis. The process and tools also become a means of justifying or selling their perspective to the commander. As discussed in the needs assessment section, many times the staffs' briefings to the commander may or may not match the original command guidance. Therefore, a separate command analysis is necessary to make sure that the staff's analysis is not only accurate but that it also coincides with the original intent.

Step III: Decision Making (Intent, Mission Orders, Main Effort). This step is the most important command related step because it translates the commander's vision

into a recognizable output to his staff and his subordinates. It is the step least addressed by the proposed curriculum. Although there are proposed TLOs and ELOs that address decision making, the focus is on staff related tools and not command related output.[121] Again, in the practical exercises (PEs), the instructor conducts all the command related decision making outputs (e.g., guidance and orders). There are no exercises that require decision making with limited information and time.[122] However, written examinations will provide the students with some time constraint decision making practice.

The proposed curriculum does add a course that specifically addresses command versus control.[123] It also specifically addresses the outputs (intent, mission orders, main effort) and may require the actual writing of an intent statement.[124] However, this course is only at the "knowledge level" or the lowest level of the cognitive domain (App C).

The four student commanders in the capstone exercise will also get some training in decision making. However, the emphasis is still on the staff and their ability to conduct their jobs based on the instructor's decision.[125]

While instruction does emphasize designation and weighting of the main effort, it is from a staff, rather than a command, perspective. Moreover, the aspect of responsibility is not fully identified or applied because

there is no role-playing of subordinate commanders.

Step IV: Cybernetic Operations (Control): This step is heavily emphasized by the proposed curriculum. There are numerous proposed TLOs and ELOs that address the leadership and control processes.[126] Additionally, the new curriculum will increase training on the Maneuver Control System (MCS) and will attempt to integrate education of other technologically advanced systems.[127] Management is specifically addressed in the leadership instruction, and is alluded to in discussions involving other courses.[128] The feedback process is not specifically addressed by any of the proposed course TLOs or ELOs. However, some feedback discussion does occur in some of the courses.[129] History courses also facilitate student analysis of cybernetic operations with some emphasis on the commander's role in the analysis process.[130]

This step suffers from the same course emphasis problem as the other steps. Although there are some knowledge and comprehension level discussions involving a commander's role in these processes, the emphasis in the higher categories of the cognitive domain is on the staff's, not the commander's, role in cybernetic operations.[131]

Communication Filters. The curriculum's emphasis is on educating and training leaders to coach staff writing and presentation techniques.[132] Although there is some knowledge level discussion concerning the communication

process, interpersonal communication knowledge, skills, and techniques are not specifically addressed. This failure may account for some of the communication process problems identified in the needs assessment.

Some interpersonal communication instruction and evaluation occurs during other courses. However, the emphasis is on content and not necessarily on communication effectiveness or understanding. The institution's methods of instruction use near perfect information to obtain near perfect solutions. Therefore, the effects of poor communication are underestimated. For example, if a student were to role-play as a commander and issue faulty or misunderstood guidance or intent to a student staff, the staff would be forced to go through the clarification process or develop plans from faulty information. The needs assessment indicates that this would replicate the same problems experienced by units at the CTCs.

In summary, the proposed curriculum is not focused on educating or training tactical commanders for the future battlefield. There is heavy emphasis on educating and training the analysis and cybernetic operation steps but only from a staff officers perspective. The embellishment of cybernetic operations also appears to emphasize control processes over those of command. Additionally, decision making education and training is the least trained step in the command process model.

V. SUMMARY AND CONCLUSIONS

> Criticism exists only to recognize the truth not act as judge!
>
> -- Clausewitz[133]

Summary

The purpose of this study was to determine whether the proposed curriculum is being designed to educate tactical leaders to command on the future airland battlefield. A command process model was developed to serve as analysis criteria to conduct a command needs assessment and to analyze the 1991-92 proposed course curriculum.

The command needs assessment identified command requirements necessary to operate on this future battlefield. In general, ALB-F concept discussions and senior Army commanders identified the following needs of the future ALB commander:

* Commanders must develop a command philosophy that embodies mission tactics and the concept of decentralized execution.
* Commanders must emphasize command over control.
* Commanders must be able to quickly identify, analyze (vision), decide, and express their decision in terms of mission orders, intent and designation of the main effort.
* Commanders must be able to use the cybernetic (control) processes to synchronize and sequence the battlefield actions in the overall concept of the higher commander's intent.

Additionally, ALB-F concepts and senior commanders identify the need for leader training and institutional education to develop programs and curriculums that support the attain-

ment of the desired commander attributes listed above.

The needs assessment also identified current command problem areas that may impact on attaining these command requirements. Senior Army leaders, contemporary authors, current studies and CTC results identified the following problem areas:

* Commanders have problems with:
  ** Analyzing and developing vision.
  ** Decision making.
  ** Knowing and using mission orders.
  ** Understanding, developing, and expressing intent.
  ** Understanding their responsibility in relation to the main effort.
  ** Knowing how and when to use their authority as a commander.
* Lack of standardized terminology, dependence on high technology communication systems and poor use of interpersonal communication methods.
* Commander's tendency to emphasize control over command, due to:
  ** Technological advances that facilitate over control.
  ** Current training practices.
  ** Some commander's philosophy of zero deficiencies.
  ** Current analysis and control tools (IPB, decision matrices, synchronization matrices).
* Staff process domination over command process.

The 1991-92 analysis of the proposed curriculum was limited by the curriculum's stage of development process. However, it was possible to determine the basic curriculum intent and focus. In general, the proposed curriculum:

* Emphasizes leader development but does not specifically emphasize the process or art of command.
* Emphasizes specific leader training, in particular vision development, from an organizational rather than a battle command perspective.
* Emphasizes staff processes over command processes.

* Emphasizes analysis and cybernetic processes, but from a staff perspective.
* Emphasizes cybernetic operations (control, leadership, management, and feedback) and the use of technologically advanced systems like the MCS.
* Limits decision making to examinations and staff related decisions.
* Increases emphasis on the use of historical command vignettes.
* Contains one lesson that defines and discusses intent, mission tactics and main effort responsibilities. However, there is currently no proposed lesson that requires the formulation or use or application of these concepts.
* Limits communication education to staff writing and briefing supervisory techniques. There are no specific interpersonal communication or battlefield communication educational lessons.
* Adds a capstone exercise that provides at least four students with the opportunity to role-play as the commander and perform the command process steps.

Conclusions:

The needs assessment identified several requirements that are necessary for command on the future battlefield. It also identified numerous command related problem areas that may impact on the attainment of these ALB-F command requirements. The proposed CGSOC curriculum indirectly addresses some of the identified command needs. However, it does not specifically address these needs from a command perspective. Consequently, the proposed course appears to fall short of educating tactical leaders to command on the future battlefield.

VI. RECOMMENDATIONS

This study was not originally designed to produce recommendations. However, during the course of the research several command related questions arose that may need further study. It also appears that a recommendation that may improve the curriculum might be appropriate to assist the revision process.

Recommendation for Additional Studies

The following questions require additional research and study because of their impact on the education and training of commanders. First, can a decentralized command philosophy be imbued into a commander without providing instruction that requires the practice of the decentralized command process? Second, can a commander learn the command process by performing related staff processes? Third, does the heavy emphasis on analytical tools, cybernetic operations, and the reduced emphasis on the command process as a whole produce commanders who will control more and command less? Fourth, if institutions do not focus on educating or training leaders on the basics of the command process, where and when does it occur? Finally, if commanders are never taught the basics of the command process, how can they ever adequately practice the art of command?

Recommendation for Curriculum Modification

The proposed (and past) curriculum's major problem is

that it bases its instructional emphasis on training staff officers and not commanders. Instead of a staff perspective, the revised course could emphasize instruction from a command perspective. This would require only slight modifications in the curriculum and the methods of instruction, but it would require a revolutionary change in the mind-set of how institutions (CGSC) educate future commanders.

For example, curriculum and methods of instruction could adjust PEs to include at least two levels of command. There could also be more decision making exercises under conditions of limited time and information, which more closely replicates the challenges of the environment in which future commanders will practice command.

Education of staff processes will still be necessary, but they could be conducted from the perspective of what a commander should know and bring to the process. Communication processes should focus more on communicative understanding than on staff writing and presentation techniques.

The revolutionary change stems from the perspective from which the instruction is taught. For example, instead of educating the student on the intelligence estimate, instructional emphasis should focus on the guidance a commander should give to his S2 and how the intelligence process facilitates the commander's analysis and vision formulation in terms of providing commander's critical

information requirements. To accomplish this change in perspective, the command process model discussed in Appendix A may serve as a starting point from which to modify the focus of the proposed curriculum. This model, in conjunction with the shortfalls identified in the needs assessment section of this study, provides a starting point for achieving the change required to effectively educate future commanders. In conclusion, a revolutionary change may be the only way to address the current command problems and achieve the identified ALB-F command requirements.

Appendix A:

TACTICAL COMMAND PROCESS MODEL
(EXPANDED VERSION)

Authors Comments.

FM 22-103 identifies command as a process but fails to identify the components of this process. Further research revealed characteristics, attributes, and qualities of a good commander. However, no specific command process could be identified.

While conducting interviews for this study, the concept of a "command process" appeared invalid and even repugnant to some of the people I interviewed. The majority of those interviewed saw command as an "art" and not as a "process." This contradiction between doctrine (FM 22-103) and the views of successful and competent leaders and educators caused me to look further into the concept of command and the process of command.

This author's initial findings and beliefs are best stated by BG Miller's explanation of the art of command:

> Like painting, command is an art. There are some related processes that contribute to it but they are not the art. Certain sequences and rules are followed in mixing colors, achieving perspective, focusing attention. But, art can and has been created outside the rules and the norm. Likewise the art of command is influenced by supporting processes. These processes are not "command." One exercises command, which is much more than presiding over (or within) a process.[134]

Additionally, successful commanders are those who effectively apply the art of command, not necessarily the processes of command.

The problem still confronting institutions and the Army in general is how to educate or train the art of command. Returning to the painter analogy, a painter can learn by doing himself. In this case, he normally learns by trial and error (on the job training). The painter can also learn from someone else he works for or with. In this case, the painter learns only what the person he is working for or with is capable of teaching him (mentoring or apprenticeship). A painter can also receive formal education in painting processes to help him in developing and perfecting his talents. Finally, he can use any combination of the above techniques.

Except for a short course, most commanders do not receive formal education in the art of command. They

receive leader training and education, but not command education or training. Therefore, most commanders learn to command through on the job training, mentoring and apprenticeship. This type of command training has its limitations. On the job training is limited by the fact that most commanders don't get to command in combat. Therefore, their tactical command expertise is limited to the quality of "commander" related training done in the unit. Mentoring and apprenticeship education and training are limited to the skills, attributes and availability of the mentor.

The question remains as to where the commander learns the basic skills and processes necessary to command. In fact, I was often asked by instructors I interviewed, "How do you teach command or the art of command?"

Although effective command is "much more than presiding over (or within) a process," a command process may be useful for educating and training commanders. By identifying those command related processes, course authors could design a curriculum that specifically addresses these processes. Like a painter, the commander's results would be as good as his ability to apply the art of command.

The tactical command process model discussed on the following pages is an attempt by this author to develop a model that could be used to:

* Provide institutions with measurable criteria for developing command related educational courses.
* Provide a possible step by step procedure for the command process discussed in FM 22-103.
* Delineate critical commander outputs to his staff and subordinates.

Some method must be developed to educate commanders. Leaving commander development to "mentoring", "apprenticeship" and "on the job training" is not developing the type of commanders and command climates necessary to execute ALB-F concepts.

TACTICAL COMMAND PROCESS MODEL (EXPANDED VERSION)

This is an expanded version of the model used as analysis criteria for this study. This version was expanded using additional information gained during the research portion of this study.

The model's steps are sequential and at times interactive. The feedback process makes the model dynamic in nature. The command process is also continuous. A commander is either planning, preparing or executing a mission (combat or otherwise). Even if one mission or phase is completed, a new mission or phase will be next in line to be processed. The phases may also overlap for simultaneous or sequential missions.

Additionally, the process has several command prerequisites:

* First, the commander must be tactically and technically proficient in his profession.

* Second, the command philosophy or environment must embrace mission tactics at every level of command. A "zero deficiency" philosophy is contradictory to the training and educating of a commander.

* Third, he must recognize the affect of communication filters on this process and develop feedback techniques to overcome these barriers which can cause distortion.

* Fourth, the commander must understand the cybernetic operation processes. He must know where to provide command guidance so the cybernetic process supports his vision instead of driving it. He must also know when to use his authority of command to make sure an action is initiated or completed.

* Finally, commander development is going to take time. Experience is the best educator, yet, command experience, especially under combat situations, is extremely limited. Therefore, training must be as realistic as possible and it must include the commander.

TACTICAL COMMAND PROCESS
MODEL

STEP 1: Initiation — **Mission, Situation Change or Information Update**

*****Communication Filter*****
Interpersonal Barriers
(Physical/Psychological)

STEP 2: Analysis — Vision or Cybernetic, based on
- METT-T + Higher Intent
- Commander's Knowledge and Expertise
- Situation Input (Staff & Commander's Feedback)
- Coup d'oeil/ Fingerspitzengefuehl (intuitive)

STEP 3: Decision — Vision or Cybernetic in the form of commander's guidance or orders and communicated as output in the form of
- Intent (vision)
  - * Purpose of the Operation
  - * Endstate (Defined in terms of Forces, Enemy, Terrain)
  - * Envisioned Attainment of Endstates
- Mission Order (Freedom of Action)
  - * Mission (task + purpose)
  - * Cybernetic Guidance (as necessary)
- Main Effort (Responsibility)
  - * Designation
  - * Weighting (Task Organization)
  - * Subordinate Responsibility

Communication Filter
Interpersonal Barriers
(Physical/Psychological)

STEP 4: Cybernetic Operations (Authority) — Control Process
Leadership Process
Management Process
Feedback Process

STEP BY STEP DISCUSSION

STEP 1: Initiation — **Mission, Situation Change or Information update.**

Every process has a beginning phase. In this case, the command process is initiated by a mission from a higher headquarters. It also can result from a situation change in the cybernetic operations or from an information update (e.g., staff briefing). This change is then fed back to this step to renew the command process using the new information. This re-initiation may or may not cause a change to the commanders original vision or decision making output.

This step is often seen as unimportant because it only signals the starting point of the analysis step. However, it is an extremely important step. A commander must react to new information in a timely manner to stay within the enemy's decision cycle.

****

Communication Filter
Interpersonal Barriers
(Physical/Psychological)

This intermediate step occurs between every step in this process. It is also a major cause of fog of war problems that every commander struggles to overcome. The concept of communication "consists of the transmission of symbols to which meaning is attached."[135] The process of communication consists of the communicator -- a channel -- the recipient.

The communicator selects the information he wants to send, makes an estimate of the knowledge the recipient needs to decode the information and then encodes the information into recognizable symbols (eg. control measures, words, hand and arm signals). In this step the communicator is the higher commander or someone in the feedback chain (subordinate commander, staff officer, soldier, etc.).

The channel can consist of sound (voice/other), light (vision) and electronic. If the recipient is the commander, he must receive, decode (if possible) and then add to memory. The final, less obvious step is the feedback. In this case, the commander lets the sender know he received or did not receive (understand) the message.

This process also has physical and psychological barriers that further hinder the process. Physical

barriers can be distance, the size of the group involved in the communication process, too much communication (span of control problem), channel medium vulnerabilities and direction of communication (e.g., one way, no feedback). Psychological barriers can include perceptual, conceptual and cultural barriers. Taking Command by COL Hays and LTC Thomas contains an in depth discussion of this topic.[136]

Another barrier, identified in the needs analysis, is the lack of common doctrine and standardized terminology. Without a professional vocabulary, there is an increased chance of communication barriers in the communication process.

****

STEP 2: Analysis

Vision or cybernetic, based on
- METT-T + Higher Intent
- Commander's Knowledge and Expertise
- Situation Input (Staff & Commander's Feedback)
- Coup d'oeil
  Fingerspitzengefuehl
  (intuitive)

There are two types of analysis a commander must perform, often simultaneously. The first type of analysis produces a commander's vision of "what and why" and the second type produces a commander's cybernetic vision of "how." When a commander has completed his vision of "what and how" it normally does not substantially change. However, the commander reviews it for validity each time he initiates the command process. The second type, cybernetic vision, occurs in two phases. Phase I is the initial analysis to determine those cybernetic measures necessary to construct the initial OPORD (e.g. staff guidance, control measures). Phase II is the constant review of the initially established cybernetic measures. Neither of these types or phases constitute a decision. They instead, represent the analysis of information necessary to make a decision.

The majority of a commander's education and training focuses on the "how" type of analysis and not on the "what and why." The CGSOC's curriculum is a good example of the "how" emphasized education and training. A reason for this is "what and why" are more difficult to evaluate than "how." For example, it is much easier to measure if a student designated the main effort (i.e. in the order, on the graphics) than it is to have him explain why he established it where he did. (Note: it is not impossible, it's just harder). However, in this author's view, it is much more important for a commander to determine what he wants

to do and why he wants it done rather than how it will be done.

Regardless of the type of analysis the responsibility to accurately analyze belongs entirely to the commander. The staff and analysis tools assist commanders in the process, but the final vision formulation responsibility remains (or should remain) with the commander.

It can be argued that people are born with an aptitude for conducting analysis that education and training can only slightly improve or polish. This view coincides with many theorists' argument that great generals did not have to be professional soldiers or have great knowledge in soldier tactics.[137] Being able to analyze information and then make a decision is really all that is required. This could also account for the concept of coup d'oeil and the recognition that only a few commanders possess this capability.[138]

Accepting the concept that some commanders are inherently better at formulating vision, consequential education and training can only perfect the commanders skills within his capabilities (e.g., great commanders may be born and not necessarily made, but they can be improved). However, institutions must develop all commanders to their potential. Every commander cannot be great, but we still require good commanders.

Both types of analysis include the commander's assessment of the METT-T variables in conjunction with the higher commander's intent. The METT-T variable analysis essentially addresses all the key elements necessary to develop a commander's vision. The remaining components of this step shape and assist the ways, means and adequacy in which the commander completes this analysis. The commanders knowledge (tactics, doctrine) and expertise (ability, and experience) obviously assist the commander's analysis of METT-T. This aspect of vision formulation is discussed in FM 22-103.

The staff, subordinate commanders and current analysis tools (including computers) can assist the commander in his analysis of the METT-T variables, but they are only effective as they are employed by the commander. They only assist and speed up the process, they should not be the primary means of vision formulation. That responsibility remains with the commander.

The last component is coup d'oeil or fingerspitzengefuehl. Some define these terms as a sixth sense.[139] However, for purposes of this model it is more of an intuitive process that occurs based on an individual's ability to evaluate the METT-T factors without a conscious recognition of how they arrived at the conclusion. This normally occurs in a relatively short period of time. Some commanders may be naturally gifted with this capability. However, this model proposes that with experience (training

and education (especially combat) this component can be improved in all commanders. The only difference is to what degree.

In summary, efficient vision formulation may depend on the individual, but the education and training process can improve the analysis process and ultimately the final vision.

****

STEP 3: Decision Vision or Cybernetic in the form of commander's guidance or orders and communicated as output in the form of

- Intent (vision)
  - * Purpose of the Operation
  - * Endstate (Forces, Enemy, Terrain)
  - * Envisioned Attainment of Endstates
- Mission Order (Freedom of Action)
  - * Mission (task + purpose)
  - * Cybernetic Guidance (as required)
- Main Effort (Responsibility)
  - * Designation
  - * Weighting (Task Organization)
  - * Subordinate Responsibility

For the purpose of this model there are two types of decisions, vision and cybernetic. Vision decisions are those decisions involving the formulation of the commander's vision (what and why). Vision decisions occur normally during the planning phase. Vision decisions involve the commander's initial internal decision as to what guidance he should provide the staff, to initiate the staff planning process, what information to put in the warning order and what should be the restated mission. Other vision decisions occur in the form of additional guidance to the staff during the planning phase and may include additional orders (Warning Orders) to subordinates. The final vision decision takes the form of the operations order.

Cybernetic decisions are those decisions that are made to achieve the formulated vision (how). Cybernetic decisions normally occur during the preparation and execution phases of the operation. [note: planning, preparation, and sometimes execution phases are often conducted simultaneously. Therefore, a commander may be making vision and cybernetic decisions at the same time.] Examples of cybernetic decisions in the planning phase include: establish-

ment of control measures necessary to coordinate and synchronize an operation, time schedules, designation of certain PIRs Examples of cybernetic decisions during the preparation phase include: adjustment of positions or control measures based on reconnaissance, adjustment or addition of control measures based on rehearsals, use of certain types of leadership skills (e.g., motivational speech to troops), establishment of maintenance priorities Examples of cybernetic decisions during the execution phase include: decisions to fire a certain TRP, commit the reserve, assert authority, lead from the front.

A cybernetic decision may also trigger a vision decision. For example, a commander's cybernetic decision to commit the reserve early may result in more or less success than originally envisioned. Therefore, the commander must begin the command process (step I) and formulate a new vision. In this example, the commander may conduct the entire command process in his head and begin issuing vision and cybernetic guidance and orders (e.g., FRAGO).

Vision and cybernetic decisions take two forms. They are either command guidance or command orders. Guidance is just that, a guide to the direction in which the commander wants to move or what he wants to emphasize. Orders are authoritative and legally binding. For example, a commander gives guidance to his staff in the preparation of the plan or to his subordinate commanders when they are preparing their defensive positions. A commander gives an order to his subordinate commanders when assigning missions or to his staff when he directs the S4 to get a resupply of ammunition to a certain unit.

Regardless of the type or form of the decision, the output should take the form of intent, mission orders and main effort. However, some of the output will remain the same. For example, if it is a cybernetic decision to change the main effort unit, the intent will probably remain the same for the overall unit. The intent of the subordinate unit assuming the main effort now changes.

The intent output components take the form of purpose of the operation, endstate (in terms of forces, enemy, and terrain) and the envisionment of the attainment of the endstates (brief how to). This formulation or definition of intent is based on the current proposed definition being reviewed by CAC.[140]

The definition and components of mission orders is a modified version of the definition contained in the 1982 version of FM 100-5 Operations.[141] The mission order is a task plus the purpose (same as the intent purpose). It may also include what this model calls cybernetic or control guidance. The perfect mission order environment would not require the use of cybernetic guidance. This type of mission order would require a long time association between the commander and the person he is issuing the order to.

For example, if a commander has been fighting with a subordinate commander for a hundred battles only a task and a purpose may be required. If a commander receives a new subordinate commander he may be forced to give additional guidance, assign specific control measures, and use a special leadership technique to make sure the subordinate commander clearly understands what he is to do. As GEN Balck stated: "It depended entirely on the subordinate. If he was a stupid fellow, you had to go into much detail explaining the situation to him; if he was an intelligent officer, a word was sufficient."[142] Under normal situations, most commanders will be required to issue some cybernetic guidance.

The main effort components were derived from interviews with GEN Foss TRADOC Commander and COL Ernst, director BCTP. The critical component is the commander's decision and designation of the main effort. Under ideal situations, the designation of the main effort is all that is needed to harmonize the battlefield events because combat, CS and CSS would know what their responsibilities are to support the main effort. Normally, however, a commander must provide specific guidance (e.g., task organization) in weighting of the main effort). Finally, the subordinate responsibility as just discussed should be inherently understood. However, for clarity a commander may have to specifically address subordinate responsibilities.

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Communication Filter
Interpersonal Barriers
(Physical/Psychological)

This step involves the same discussion concerning methods of communication and barriers to communication. At this phase in the process, this communication filter addresses the communication involved in the commander's conveyance of his decision outputs. This is an important phase. A commander can accurately develop his vision. He can make a proper decision. But if his outputs are not effectively communicated to the staff or his subordinates then the cybernetic operations phase will not have a chance to succeed.

STEP 4: Cybernetic Operations (Authority)

Control Process
Leadership Process
Management Process
Feedback Process

By definition, cybernetic means "the theoretical study of control processes in electronic, mechanical and biological systems, especially the mathematical analysis of the flow of information in such a system."[143] For purposes of this model, the cybernetic operations were used to symbolize control processes. The addition of the concept of authority ties in a specific aspect of command because the commander is the one who can influence these processes based on the authority given to him by his position. Although other personnel or leaders may operate in these processes, (e.g., the FSO, or CSM) the commander has the ultimate responsibility to make the processes function. To do this, he may be forced to assert his authority to ensure its accomplishment.

The control, leadership, and management processes are discussed in some detail in FM 22-103 and will not be repeated here.[144] However, additional command related discussion will be added. The control process, as defined by GEN Foss, contains four major components: mission (task), control measures, common doctrine, and sigma star (or technological control systems such as the Army Tactical Command and Control System).[145]

Although often used synonymously with command, leadership does not develop or decide the commander's vision. It is a control technique used to implement the commander's vision.

Commanders may be forced to make decisions about managing resources to attain the vision. For example, the commander's decision of the ammunition control supply rate (CSR) affects the management process of ammunition.

Finally, the feedback process is an extremely important process. It can come from staffs, subordinate commanders, soldiers, senses Feedback may come as the result of the commander's supervision of the order, battle preparation or battle execution. It may also be the result of the communication process (e.g., reading body language), or in the form of spot reports and situation reports. Regardless of the form, the commander should use as many means of feedback as possible. In addition, the commander should always be on the guard for communication filters and barriers that can disrupt or distort the feedback process. As discussed earlier, the feedback process is a major initiator of the command process.

Example Command Process Cycles.

Cycle 1 - Planning:

* A Battalion (BN) commander receives a mission order from his Brigade (BDE) commander.
* Based on the BN Cdr's interpretation of the mission order through the communication filter, the BN Cdr begins his mission analysis process.
* Based on his analysis, the BN Cdr issues a decision in the form of a warning order to subordinates and guidance to his staff. [Note: An alert warning order may also go out before the commander actually does a full mission analysis.]
* The warning order and guidance should include an initial intent (vision) statement (as defined above), mission order and, if possible, where he prefers the main effort.
* The staff and subordinate commanders take the commander's decisions (again through their communication filters) and begin cybernetic operations. For example, the staff will start their estimate processes and the subordinate commanders will start their planning and preparation phases.
* Both the subordinate commanders and staff provide the commander feedback. The commanders may provide the feedback directly to the commander or to the staff in the form of a status report, situation report, a request for decision clarification. The staff will provide feedback in terms of questions, situation reports and, eventually, the staff estimate briefings. [Note: The commander may be actually going through several command cycles as he receives feedback. For example, a staff officer asks for guidance on a particular issue. The commander now has new information he must analyze and make a decision on, thus repeating the process].

Cycle 2 - OPORD:

* The commander receives the input from his staff and commanders and re-analyzes his vision based on the new information.
* The commander makes final vision decision concerning the plan. Again, it takes the form of an order and is output as intent, mission orders and designation of main effort. How much output is necessary depends on the audience/ receivers/subordinates.
* After completing his vision decisions, the commander focuses on cybernetic operations and cybernetic decisions. For example, the commander will supervise the preparation phase of the operation. While supervising he may use some or all of the cybernetic processes. [Note: As discussed earlier, cybernetic decisions will be made at the same time vision decisions are occurring.]

* During the cybernetic operations, the commander will be presented with feedback about the preparation for the operation.

Cycle 3 - Preparation:

* Based on feedback during the preparation phase, the commander re-initiates his vision analysis process. In most cases, his vision decision will not change. If critical new information is made available that affects his original vision, he might be forced to change. The commander will conduct cybernetic vision analysis.
* In most cases, the commander's analysis will focus on cybernetic decisions, like changing control measures, movement times.
* These changes feedback into the cybernetic operations step and the command process continues.
[note: This cycle may be repeated numerous times]

Cycle 4 - Execution:

* This cycle parallels the preparation cycle except the cybernetic decisions will be made concerning the execution. Potential decisions include the executing of obstacles, the firing of target groups, and the commitment of the reserve.

Cycle 5 - New Mission or Situation Change:

* Upon receipt of a new mission or a change in the situation that drastically affects the commander's vision, the command process cycle begins again. As mentioned earlier, this restart of the cycles (1-5) may be completed in a matter of minutes with little input or feedback on which the commander can base his revised vision or cybernetic decisions. It may even be <u>coup d'oeil</u>. Regardless of the method, the key factor is the commander's communication of his decision outputs so that they are understood by all of his subordinates.

In summary, this model is only a conceptual starting point for the development of a complete command process model. Experts in the field of education and training can develop a complete model for educating and training future commanders. Regardless of the content, using a command model as the basis of instruction for courses like CGSOC could effectively refocus the education process to the command realm.

Appendix B

CGSOC 1991-92 CURRICULUM SUMMARY BRIEFING

This study was conducted while the proposed CGSOC curriculum was still under development. The attached curriculum briefing represents the information that was used to conduct the curriculum analysis in section IV. The final curriculum may look substantially different than the one used during this study.

CGSC

AY 1991-92

CURRICULUM

"THE VISION"

INITIAL STEPS

- ANALYZED CGSC MISSION AND REVIEWED MISSIONS/GOALS
  - --REVIEWED & UPDATED SCHOOLS AND DEPARTMENTS MISSION & GOALS
- CONDUCTED NEEDS ANALYSIS
  - --WHAT DOES A CGSC GRAD NEED?
- CONDUCTED AN ENVIRONMENTAL ASSESSMENT
  - --WHERE IS THE ARMY GOING?

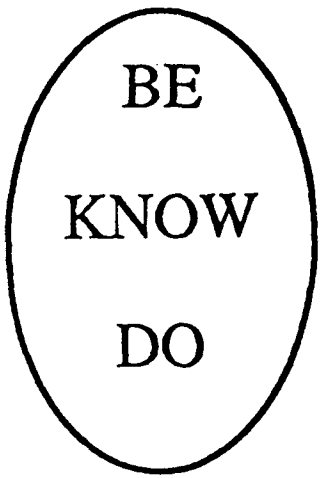
CGSC MISSION

CURRENT MISSION

THE MISSION OF THE COMMAND AND GENERAL STAFF COLLEGE IS TWO FOLD:

TO DEVELOP LEADERS WHO WILL TRAIN AND FIGHT UNITS AT THE TACTICAL AND OPERATIONAL LEVELS.

TO DEVELOP COMBINED ARMS DOCTRINE AND ASSIST IN ITS PROMULGATION.



RESTATED MISSION

THE MISSION OF THE COMMAND AND GENERAL STAFF COLLEGE IS TO EDUCATE LEADERS IN THE VALUES AND PRACTICE OF THE PROFESSION OF ARMS; TO DEVELOP DOCTRINE THAT GUIDES THE ARMY AS AN INSTRUMENT OF NATIONAL POLICY; AND TO PROMOTE THE STUDY OF MILITARY ART AND SCIENCE THROUGHOUT THE DEFENSE COMMUNITY.

DIFFERENCES

- RECOGNIZES VALUES OF PROFESSION -
- REQUIREMENT TO TRAIN AND EDUCATE -
- BALANCES ACROSS THE SPECTRUM OF CONFLICT -
- RECOGNIZES CGSC'S EXTERNAL MISSION -

CGSC GOALS

CURRENT GOALS

(1) TRAIN AND EDUCATE LEADERS WHO CAN APPLY COMBAT POWER AT THE TACTICAL AND OPERATIONAL LEVELS.

(2) DEVELOP COMBINED ARMS DOCTRINE, ASSIST IN ITS INTEGRATION THROUGHOUT THE ARMY, AND STAY ON THE LEADING EDGE OF WARFIGHTING IDEAS.

(3) DEVELOP LEADERS COMPETENT IN JOINT AND COMBINED OPERATIONS.

(4) DEVELOP LEADERS WHO EXEMPLIFY THE HIGHEST PROFESSIONAL STANDARDS.

(5) DEVELOP LEADERS WHO WILL ANTICIPATE, MANAGE, AND EXPLOIT CHANGE.

(6) DEVELOP THE FULL POTENTIAL WITHIN THE COMMAND AND GENERAL STAFF COLLEGE(CGSC).

RESTATED GOALS

-DEVELOP LEADERS COMPETENT IN THE ART AND SCIENCE OF MILITARY OPERATIONS ***ACROSS THE SPECTRUM OF CONFLICT.***

-DEVELOP LEADERS WHO EXEMPLIFY THE ***HIGHEST PROFESSIONAL AND ETHICAL STANDARDS.***

-DEVELOP LEADERS WHO WILL ANTICIPATE, MANAGE, AND EXPLOIT CHANGE.

-DEVELOP AND INTEGRATE SELECTED ARMY, ***JOINT, AND COMBINED DOCTRINE.***

-PROVIDE A ***FORUM FOR INTELLECTUAL EXCHANGE*** RELATED TO MILITARY OPERATIONS AND THE PROFESSION OF ARMS.

-CONDUCT AND PUBLISH RESEARCH OF THE PROFESSION OF ARMS.

- DEVELOP, IMPLEMENT, AND ***SUPPORT OTHER DA AND TRADOC DIRECTED PROGRAMS.***

-SUSTAIN CGSC AS AN INSTITUTION OF EXCELLENCE.

CGSOC MISSION

CURRENT MISSION

CGSOC PREPARES OFFICERS TO THINK, DECIDE, COMMUNICATE, PLAN AND ACT AS GENERAL STAFF OFFICERS AND FIELD GRADE COMMANDERS.

RESTATED MISSION

EDUCATE SELECTED OFFICERS TO CONDUCT MILITARY OPERATIONS IN PEACE, CONFLICT AND WAR IN ACCORDANCE WITH ESTABLISHED DOCTRINE AND WITH EMPHASIS AT CORPS AND DIVISION LEVEL.

DIFFERENCES

- ORIENTATED TO MILITARY OPERATIONS
- CORPS AND DIVISION LEVEL
- DEMONSTRATED PERFORMANCE
- MILITARY LEADERSHIP PRINCIPLES

CGSOC GOALS

CURRENT GOALS

PRODUCE OFFICERS WHO CAN:
(1) APPLY PRINCIPLES, DOCTRINE, AND TECHNIQUES OF MILITARY OPERATIONS AT THE TACTICAL AND OPERATIONAL LEVEL OF WAR. THE CENTER OF MASS FOR SUCH APPLICATION IN CGSOC IS AT THE CORPS LEVEL.

(2)APPLY THE PRINCIPLES OF LEADERSHIP IN PROFESSIONAL LIFE.

(3) APPLY THE PRINCIPLES AND TECHNIQUES OF LOGISTICS SUPPORT NECESSARY TO SUSTAIN MILITARY OPERATIONS.

(4) FUNCTION AS STAFF OFFICERS IN JOINT AND COMBINED OPERATIONS.

(5) RELATE THE APPLICATION OF MILITARY FORCE AS A COMPONENT OF NATIONAL POLICY DECISION MAKING.

(6) APPLY PRINCIPLES, DOCTRINE AND TECHNIQUES OF MILITARY OPERATIONS IN LOW INTENSITY CONFLICTS IN MILITARY OPERATIONS SHORT OF WAR.

(7) APPLY AN UNDERSTANDING OF MILITARY HISTORY TO CONTEMPORARY MILITARY PROBLEMS

RESTATED GOALS

TO DEVELOP OFFICERS WHO:

-DISPLAY TACTICAL AND TECHNICAL COMBINED ARMS PROFICIENCY.

-UNDERSTAND JOINT AND COMBINED OPERATIONS.

-CAN PREPARE, FIGHT, AND SUSTAIN FORCES ***ACROSS THE SPECTRUM OF CONFLICT.***

-CAN APPLY THE PERSPECTIVES OF MILITARY HISTORY.

-EMBODY THE PRINCIPLES, ATTITUDES, AND VALUES OF MILITARY LEADERSHIP.

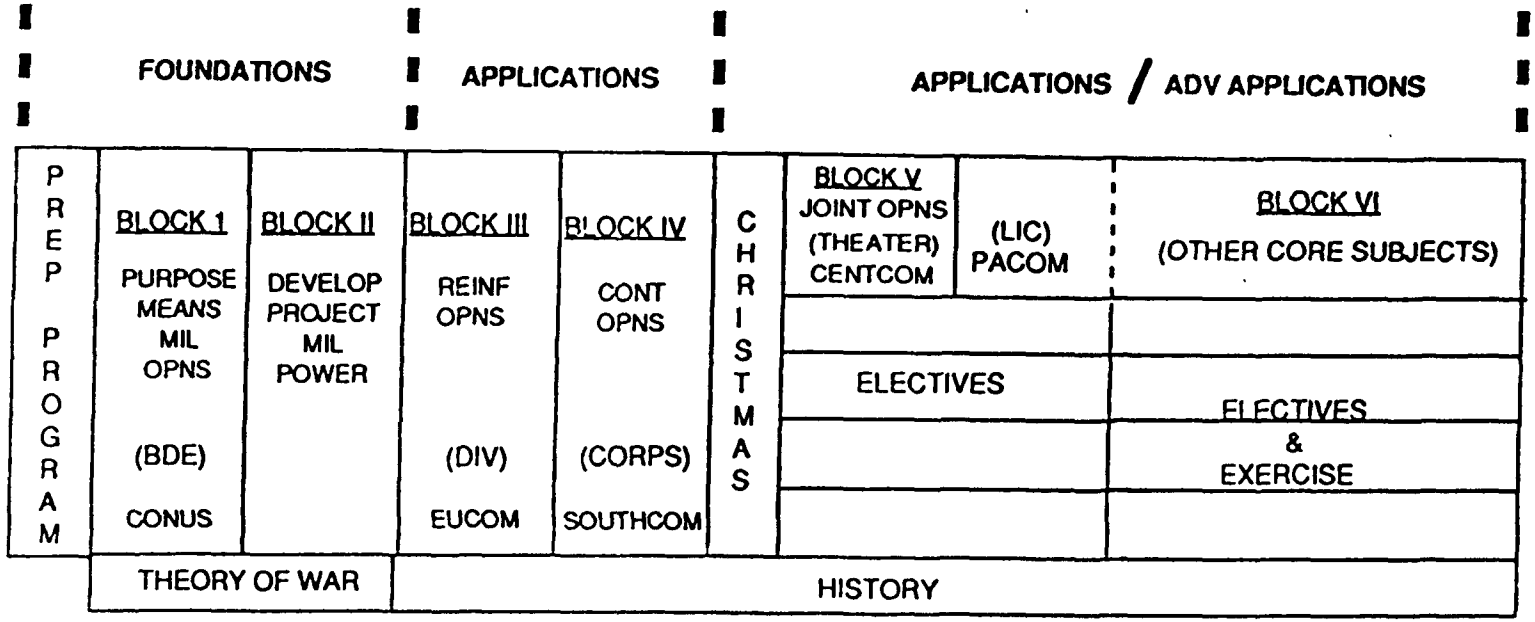
-CAN SOLVE COMPLEX PROBLEMS SYSTEMATICALLY AND UNDER PRESSURE.

-UNDERSTAND THE ROLE OF THE MILITARY IN A FREE SOCIETY.

-COMMUNICATE EFFECTIVELY IN WRITING, ORALLY, AND ELECTRONICALLY.

-CONFIDENTLY ACCEPT HIGHER LEVELS OF RESPONSIBILITY.

ACADEMIC YEAR 91-92



BLOCK I
PURPOSE AND MEANS OF MILITARY OPERATIONS
(BDE/CONUS)

TOPICS	COGNITIVE LEVEL	HOURS	REMARKS
FUNDAMENTALS OF COMBAT OPERATIONS	APPLICATION	71	ANALYZE BRIGADE COMBAT OPERATIONS
JOINT & COMBINED ENVIRONMENT	KNOWLEDGE	37.5	HOW THE US EMPLOYS ARMED FORCE AS A ELEMENT OF NATIONAL PO
SENIOR LEADERSHIP	ANALYSIS	18	RECOGNIZE LEADERSHIP CHALLENGES IN PEACE AND WAR
COMMUNICATION SKILLS	EVALUATION	16	COACH OTHERS TO WRITE
THEORY OF WAR	EVALUATION	12	ROLES, USES, AND LIMITS OF MILITARY THEORY AND DOCTRINE
HISTORY	EVALUATION	2	
PPBS/TUFMIS/FORCE INTEG	KNOWLEDGE	3	
TOTALS		159.5	

BLOCK II
DEVELOP, PROJECT AND SUSTAIN COMBAT POWER

TOPICS	COGNITIVE LEVEL	HOURS	REMARKS
JOINT PLANNING	COMPREHENSION	5	DJCO--INTRO TO JOPES
JOINT DEPLOYMENT	COMPREHENSION		DJCO--DELIBERATE AND CRISIS PLANNING
			DJCO--INTRODUCTION TO JOINT DEPLOYMENT SYSTEM
CAPSTONE	COMPREHENSION	7	DSRO--CAPSTONE RELATIONSHIP TO MOBILIZATION
PROJECT FORCES	COMPREHENSION		DSRO--MOBLIZATION, DEPLOYMENT, RECEPTION
COMPONENT SVC DEPLOYMENT	COMPREHENSION	7	AIR FORCE/ SEA
TRAINING THE FORCE	SYNTHESIS	18	DOCTRINE & PROCEDURES FOR PLANNING AND
			EXECUTING TRAINING INCLUDES BRIEFING AND
			PRESENTATION TECHNIQUES--CAL 6 HRS
SUSTAINING THE FORCE	COMPREHENSION	11	SUSTAINING COMBAT FORCES FROM THE
			NATIONAL TO THE OPERATIONAL LEVEL
CORP OPERATIONS	ANALYSIS	15	ANALYZE AIRLAND COMBAT OPERATIONS AT THE TACTICAL LEVEL
HISTORY	ANALYSIS	8	EVOLUTION OF MODERN WARFARE
SPACE	KNOWLEDGE	4	BASICS OF ARMY SPACE OPERATIONS
MEDIA	KNOWLEDGE	3	ARMY AND THE MEDIA INTERACTIONS
EXAM		4	
TOTALS		82	

BLOCK III
REINFORCEMENT AND FORWARD DEPLOYED
(DIVISION/EUCOM)

TOPICS	COGNITIVE LEVEL	HOURS	REMARKS
ROAD TO WAR	KNOWLEDGE	6	STRATEGIC OVERVIEW(US PLANNING)
TACAIR IN NATO	APPLICATION	4	ATP 35A OVERVIEW / TACAIR APPLICATIONS
THREAT	ANALYSIS	8	SOVIET STYLE OPERATIONAL ART
USN/USMC SPT IN NATO	KNOWLEDGE	2	
CORPS PLAN	ANALYSIS	4	
LEADERSHIP CASE STUDY	ANALYSIS	2	
OPERATIONAL LAW	ANALYSIS	2	
REINFORCEMENT	APPLICATION	8	DSRO--STRATEGIC SUSTAINMENT
DIVISION PLANS	SYNTHESIS	12	
UCMJ/ADMIN LAW	APPLICATION	10	
TRAINING MANAGEMENT	APPLICATION	10	TRAINING PLAN BREIFS
HISTORY	ANALYSIS	6	EVOLUTION OF MODERN WARFARE
EXAM	APP-SYN	4	CTAC/DSRO-- COMPARISON OF DIV AND CORP
TOTAL		78	

BLOCK IV
CONTINGENCY FORCE OPERATIONS
(CORPS/SOUTHCOM)

TOPICS	COGNITIVE LEVEL	HOURS	REMARKS
ROAD TO WAR	COMPREHENSION	2	DJCO--LATAM STRATEGIC OVERVIEW
SOUTHCOM OVERVIEW	COMPREHENSION	1	ROLES, MISSIONS ORGAN & RESPONSIBILITIES
JOPES COA DEVELOPMENT	COMPREHENSION	2	TIME-SENSITIVE PLANNING
CAMPAIGN PLANNING	COMPREHENSION	2	OPERATIONAL DESIGN
CONSIDERATIONS FOR JTF OPNS	APPLICATION	4	JCS TEST PUB 5-00.2
OPERATIONAL LEADERSHIP	COMPREHENSION	2	ANZIO CASE STUDY
CONTINGENCY FORCE OP LAW	COMPREHENSION	1	CASE STUDIES
FUND OF LIC	COMPREHENSION	4	DJCO--THREAT, LIC IMPERATIVES
			OPERATIONAL CATEGORIES
COUNTERINSURGENCY OPNS	APPLICATION	4	FUNDAMENTALS
CORPS CONTINGENCY OPERATIONS	ANALYSIS	48	CTAC LEAD(24HRS) W DSRO(7HRS)/CAL(2HRS)
WAR TERMINATION	COMP	4	DJCO- NATION BUILDING
HISTORY	ANALYSIS	8	EVOLUTION OF MODERN WARFARE
EXAM		2	
TOTAL		84	

BLOCK V
APPLICATION OF JOINT OPERATIONS
(THEATER/CENTCOM)

TOPICS	COGNITIVE LEVEL	HOURS	REMARKS
THEATER OVERVIEW	ANALYSIS	3	DJCO–INTRO OF STRAT CHALLENGES
STRATEGIC ANALYSIS	ANALYSIS	3	DJCO–STRATEGIC PROBLEM SOLVING(CGSC MODEL)
JOINT C3I	COMPREHENSION	6	DJCO--JPME PHASE I SUBJECT
REGIONAL FORCE ANALYSIS	ANALYSIS	5	DJCO--DSRO SPT/FORCE CAPABILITIES VS REQUIREMENTS
CAMPAIGN CONCEPT	ANALYSIS	6	DJCO--DSRO SPT/ DEVELOP OF A CAMPAIGN CONCEPT
COURSE OF ACTION DEVELOPMENT	APPLICATION	5	DJCO--JOINT PLANNING ANALYTICAL SKILLS
OPERATIONAL WARFIGHTING SEMINAR	SYNTHESIS	38	DJCO--CAL, CTAC & DSRO SPT /DEPLOY-EMPLOY-SUSTAIN
HISTORY	ANALYSIS	20	EVOLUTION OF MODERN WARFARE
TOTAL		86	

BLOCK VI
LOW INTENSITY CONFLICT
AND SPECIAL TOPICS

TOPICS	COGNITIVE LEVEL	HOURS	REMARKS
LIC (PACOM)	SYNTYHSIS	33	DJCO-- W CAL --REGIONAL OVERVIEW, ANALYZE
			CURRENT INSURGENCIES, DEVELOP COIN STRATEGY,
			LEADERSHIP REQUIREMENTS IN LIC-2HRS LAW-2HRS
ADMIN LAW	APPLICATION	2	STANDARDS OF CONTACT
RESOURCE MANAGEMENT	COMPREHENSION	5	DSRO-RESOURCE PLANNING & ALLOCATION CONCEPTS
FORCE DEVELOPMENT	COMPREHENSION	3	DSRO-FORCE DEVELOPMENT PROCESS
ANALYTICAL METHODS	EVALUATION	19	DSRO-QUANTITATIVE TOOLS FOR DECISIONMAKING
HISTORY	EVALUATION	18	EVOLUTION OF MODERN WARFARE
TOTAL		80	

Appendix C

TERMS

Major Categories in the Cognitive Domain of the Taxonomy of Educational Objectives:[146]

1. Knowledge. Knowledge is defined as the remembering of previously learned material. This may involve the recall of a wide range of material, from specific facts to complete theories, but all that is required is the bringing to mind of the appropriate information. Knowledge represents the lowest level of learning outcomes in the cognitive domain.

2. Comprehension. Comprehension is defined as the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond the simple remembering of material, and represent the lowest level of understanding.

3. Application. Application refers to the ability to use learned material in new and concrete situations. This may include the application of such things as rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than those under comprehension.

4. Analysis. Analysis refers to the ability to break down material into its component parts so that its organizational structure may be understood. This may include the identification of the parts, analysis of the relationships between parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and application because they require an understanding of both the content and the structural form of the material.

5. Synthesis. Synthesis refers to the ability to put parts together to form a new whole. This may involve the production of a unique communication (theme or speech), a plan of operations (research proposal), or a set of abstract relations (scheme for classifying information). Learning outcomes in this area stress creative behaviors, with major emphasis on the formulation of new patterns or structures.

6. Evaluation. Evaluation is concerned with the ability to judge the value of material (statement, novel, poem, research report) for a given purpose. The judgments are to be based on definite criteria. These may be internal criteria (organization) or external criteria (relevance to the purpose) and the student may determine the criteria or be given them. Learning outcomes in this area are highest in the cognitive hierarchy because they contain elements of all of the other categories, plus conscious value judgments based on clearly defined criteria.

ENDNOTES

1. Chris Bellamy, The Future of Land Warfare. (New York: St. Martin's Press, 1987), p. 243.

2. The "Airland Battle Future Umbrella Concept (Draft)" was prepared by CACDA at Ft. Leavenworth, Kansas on 1 June 1990. It is an evolving concept that attempts to envision requirements for the future battlefield.

3. This is a summary of concepts taken from "Airland Battle Future Conceptual Review" briefing slides. The briefing was developed by the Command and General Staff College (CGSC) at Ft. Leavenworth, Kansas. No date given.

4. Interview with GEN John W. Foss, TRADOC commander, Ft. Leavenworth, Kansas, 4 October 1990.

5. "Airland Battle Future Umbrella Concept (Draft)." CACDA paper drafted at Ft. Leavenworth, Kansas, 1 June 1990, p. 28.

6. U.S. Army Command and General Staff College, Annual Planning Guidance: Academic Years 1990-91 and 1991-92, Ft. Leavenworth, Kansas, 23 May 1990, p.13, paragraph c. "The revised curriculum links to a white paper published by the Chief of Staff, Army in January 1990 titled, 'A Strategic Force for the 1990s and Beyond.' The future strategic roles for the Army described in the document relate to the conceptual framework upon which the new curriculum is built. The emerging AirLand Battle Future doctrine also provided important conceptual background that guided early thinking and planning."

7. "White Paper: Leader Development." prepared by LTC Anastasio, CGSC Leadership Development Office, Ft. Leavenworth, Kansas, 22 May 1990. p. 7.

8. For purposes of this study a needs assessment is a title given to the research and analysis process to identify current command problem areas and to identify command skills that will be necessary for a commander on the future battlefield.

9. Extracted from a paper by BG Huba Wass de Czege, "Understanding and Developing Combat Power," He wrote the paper while he was Director of the School of Advanced Military Studies, 10 February 1984. p. 1. He did not cite an original source.

10. William Morris, ed. The American Heritage Dictionary of the English Language. (New York: American Heritage Publishing Co. Inc. and Houghton Mifflin Company, 1973), p. 266.

11. Ibid, p. 267.

12. Ibid, p. 5-6.

13. Ibid, p. 41.

14. Ibid, p. 42.

15. Ibid, p. 42.

16. Ibid, p. 43-44.

17. Ibid, p. 43.

18. William Morris, ed.. The American Heritage Dictionary of the English Language. (New York: American Heritage Publishing Co. Inc. and Houghton Mifflin Company, 1973), p. 1043.

19. U.S. Department of the Army, Staff Organization and Operations. Field Manual 101-5. (Washington, D.C.: Government Printing Office, May 1984), p. 5-6,7.

20. For purposes of this study cybernetic operations refers to all control related processes.

21. U.S. Department of the Army Field Manual 100-5, Operations. (Washington, D.C.: Government Printing Office, 1986), p. i.

22. Ibid, p. 21.

23. GEN John W. Foss, USA. "Command," Military Review, May 1990, p. 3,4.

24. Ibid, p. 3.

25. Interview with GEN John W. Foss, TRADOC commander, Ft. Leavenworth, Kansas, 4 October 1990.

26. U.S. Department of the Army, Military Leadership, Field Manual 22-103. (Washington, D.C.: Government Printing Office, 1985), p. 7-12.

27. Ibid, p. 38-39.

28. Ibid, p. 41-43.

29. Martin van Creveld discusses that a decentralized command and control system must have "uniformity of thinking, reliability of action, and complete confidence in subordinate-commander relationships" in his book Fighting Power: German Military Performance 1914-1945, (Fairfax, Virginia: Hero Books, 1984) p. 46.

Richard E. Simpkin develops his parameters of command model to

address the difference between an attrition theory of war and a maneuver theory of war. The model illustrates that to conduct maneuver versus attrition warfare the following command parameters must exist: "loose reign versus tight reign, dynamic versus positional [battlefield], psychological versus physical." This discussion appeared in his book Race to the Swift (New York: Brassey's Defence Publishers, 1985), p. 229.

30. Carl Von Clausewitz. On War, translated and ed. by Michael Howard and Peter Paret (Princeton, New Jersey: Princeton University Press, 1984), discussions p. 102.

31. Ibid, p. 112.

32. Sun Tzu. The Art of War, translated by Samuel B, Griffith (New York: Oxford University, 1963), p. 65.

33. BG T.R. Phillips, gen. ed., Roots of Strategy, 5 vols. (Harrisburg, PA: Stackpole, March 1985), vol. 2: My Reveries Upon the Art of War, by Marshal Maurice de Saxe, 1732, p. 294.

34. GEN William Depuy, USA. "Generals Balck and Von Mellenthin on Tactics: Implications for NATO Military Doctrine." Report prepared in conjunction with BDM, Mclean, Virginia, 19 December 1980, p. 21.

35. Carl Von Clausewitz. On War, translated and ed. by Michael Howard and Peter Paret (Princeton, New Jersey: Princeton University Press, 1984), p. 102.

36. Ibid, p. 103.

37. MS #D-080a Lothar Rendulic, "The Command Decision," Foreign Military Studies Branch, Office of Chief of Military History, undated, p. 1.

38. Infantry in Battle (Washington, D.C.: The Infantry Journal Incorporated, 1939), p. 122.

39. This concept was taken from a M.M.A.S. thesis done by Major John D. Johnson entitled, "Mission Orders in the United States Army: Is the Doctrine Effective?" at Ft. Leavenworth, Kansas, 1990, p. 15.

40. Ibid

41. Major Michael A. Burton's thesis entitled: Command and Control: is the U.S. Army's Current Problem with Decentralized Command and Control a Function of Doctrine or Training? is an excellent study that goes in substantial depth in evaluating a decentralized command philosophy and the current problems surrounding this concept of command.

42. Richard E. Simpkin, Race to the Swift (New York: Brassey's Defence Publishers, 1985), p. 227-229.

43. This quote was taken from Martin van Creveld's book entitled Fighting Power: German and U.S. Army Performance, 1939-1945, (Westport, Connecticut: Greenwood Press, 1982), p. 36.

44. GEN John W. Foss, USA. "Command." Military Review, May 1990, p. 8.

45. "Airland Battle Future Umbrella Concept (Draft)." CACDA paper drafted at Ft. Leavenworth, Kansas, 1 June 1990, p. 28.

46. Interview with GEN John W. Foss, TRADOC commander, Ft. Leavenworth, Kansas, 4 October 1990.

47. "Airland Battle Future Umbrella Concept (Draft)." CACDA paper drafted at Ft. Leavenworth, Kansas, 1 June 1990, p. 29.

48. Ibid, p.28.

49. Ibid

50. Ibid, p. 38.

51. Ibid, p. 33.

52. Ibid, p. 35.

53. Ibid, p. 35.

54. "Airland Battle Future - 1995 and Beyond." CGSC briefing slides at Ft. Leavenworth, Kansas, no date given, slide #5.

55. Ibid.

56. GEN. Carl E. Vuono, USA. "White Paper: A Strategic Force for the 1990s and Beyond." Ft. Leavenworth, Kansas, January 1990. (Mimeographed), p. 5.

57. Ibid.

58. Summarized from GEN John W. Foss, USA. "Command," Military Review, May 1990, p. 4.

59. Foss, interview.

60. GEN John W. Foss, USA. "Command," Military Review, May 1990, p. 7.

61. Foss, interview.

62. Foss, interview.

63. MS # D-080a Lothar Rendulic, "The Command Decision," Foreign Military Studies Branch, Office of Chief of Military History, undated, p. 28.

64. Foss, interview.

65. COL(P) Carl F. Ernst, USA. "Command and Control." Memorandum for Record concerning LTG Wishart's guidance regarding command and control issues. 21 December 1989, p. 2-3.

66. LTG Leonard P. Wishart, III, USA. "Leader Development and Command and Control." Military Review, July 1990, p. 13.

67. Ibid, p. 12.

68. Interview with BG John E. Miller, USA, Deputy Commandant CGSC, conducted at Fort Leavenworth Kansas. Interview, 6 November 1990.

69. Ibid, pp. 11-17.

70. Foss, Interview.

71. Foss, Interview.

72. Interview, BG Miller, 6 November 1990.

73. John D. Blair and James G. Hunt, ed. Leadership on the Future Battlefield. (New York: Pergamon-Brassey's,1985), p. 31.

74. Ibid, p. 255.

75. MAJ Daniel P. Bolger, USA. "Command or Control?" Military Review, July 1990, p. 71.

76. Ibid.

77. Ibid, p. 75.

78. Ibid, p. 76.

79. MAJ John D. Johnson, USA. "Mission Orders in the United States Army: Is the Doctrine Effective?" M.M.A.S. thesis, Ft. Leavenworth, Kansas, 1990, p. 91.

80. Ibid, p. 93.

81. Ibid, p. 93.

82. Ibid, p. 94.

83. Ibid, p. 96.

84. MAJ William F. Crain, USA. "The Mission: The Dilemma of Specified Task and Implied Commander's Intent." M.M.A.S. monograph, School of Advanced Military Studies, Ft. Leavenworth, Kansas, 3 January 1990, p 22.

85. Interview with COL(P) William West, Director CAS3, Ft. Leavenworth, Kansas, 17 July 1990.

86. Viewed by author during his tour as an observer controller at the NTC.

87. Interview with COL Daniel Butler, Director TCDC, Ft. Leavenworth, Kansas, 15 October 1990.

88. "CTC Training News Letter (Draft)." Prepared by CALL, Ft. Leavenworth, Kansas, 1988, p. 37.

89. Interview with COL Daniel Butler, Director TCDC, Ft. Leavenworth, Kansas, 15 & 18 October 1990.

90. Interview with COL(P) William West, Director CAS3, Ft. Leavenworth, Kansas, 17 July 1990.

91. "CTC Training News Letter (Draft)." Prepared by CALL, Ft. Leavenworth, Kansas, 1988, p. 2.

92. Told to the author by a battalion commander who prefers to remain anonymous, summer 1989.

93. Norman Dixon, On the Psychology of Military Incompetence. (New York: Basic Books, Inc., 1976), p. 222.

94. "CTC Training News Letter (Draft)." prepared by CALL, Ft. Leavenworth, Kansas, 1988, p. 2.

95. Bolger, p. 77.

96. Quoted by CPT John Johnson, maneuver observer controller at the NTC.

97. "NTC Lessons Learned Quarterly Trends Report - Third Quarter FY 88." Report prepared by NTC Observation Division, Ft. Irwin, California, 8 July 1988, no pages given.

98. Interview with Col Carl Ernst, Director BCTP, Ft. Leavenworth, Kansas, 1 October 1990.

99. Ibid.

100. Interview, COL Daniel Butler.

101. Interview, COL(P) West.

102. Interview, COL Daniel Butler.

103. Interview, COL(P) Ernst.

104. Ibid.

105. "CTC Training News Letter (Draft)." Prepared by CALL, Ft. Leavenworth, Kansas, 1988, p. 35.

106. These general observations were drawn from a thesis entitled "Employment of Direct Fire Systems During Offensive Operations" by Major Peter J. Palmer, MMAS, Fort Leavenworth, 1990 and separate studies on "Dismounted Operations at the NTC," "Reconnaissance/ Counterreconnaissance and Scout Operations" completed by MAJ Palmer while he worked at the NTC Observation Division Ft. Irwin, California, 1988-9. All these studies are maintained at CALL, Ft. Leavenworth, Kansas.

107. Hunt and Blair, p. 31.

108. "Airland Battle Future - 1995 and Beyond." CGSC briefing slides at Ft. Leavenworth, Kansas, no date given, slide 6.

109. U.S. Army Command and General Staff College, Annual Planning Guidance: Academic Years 1990-91 and 1991-92, Ft. Leavenworth, Kansas, 23 May 1990. p. 13.

110. Ibid.

111. Ibid, p. 14.

112. Ibid, p. 15.

113. Ibid.

114. Ibid, p. 20.

115. Ibid, p. 17 and interview with LTC Paul Johnson, block coordinator, CTAC, Ft. Leavenworth, Kansas, 25 September 1990.

116. This generalized conclusion is based on a summary of all the interviews with Directors and block coordinators, and from the discussion from the Annual Planning Guidance.

114. Interview with LTC Michael F. Koehane, CAL, curriculum block coordinator, conducted at Fort Leavenworth, Kansas on 16 October 1990.

118. In interviews with all the block coordinators there is currently no plan to have students role play as commanders. The information will be provide by the instructors.

119. Concepts taken from Benjamin S. Bloom, ed. Taxonomy of Educational Objective Handbook I: Cognitive Domain (New York: David Mckay Co. Inc, 1956) and David R. Krathwohl, Benjamin S. Bloom and Bertrain B. Masia Taxonomy of Educational Objective Handbook II: Affective Domain (New York: David Mckay Co. Inc, 1964).

120. Forrest C. Pogue. George C. Marshall: Education of a General 1880-1939 (New York: Viking Press Inc., 1963.), pp. 254-5.

121. This conclusion was based on a review of the current list of proposed TLOs and ELOs, provided to the author by the block coordinators during the interview process. Note: these TLOs and ELOs may change.

122. This conclusion is based on interviews with all the block coordinators.

123. Ibid.

124. Taken from an interview with LTC Paul Johnson, CTAC block coordinator on 25 September 1990.

125. Ibid.

126. Ibid.

127. Interview with LTC Paul Johnson.

128. Ibid and interview with LTC Michael F. Koehane, block coordinator, CAL, Ft. Leavenworth, Kansas, 9 October 1990.

129. Ibid.

130. Interview with LTC Robert Ramsey, block coordinator, CSI, Ft. Leavenworth, Kansas, 27 September 1990.

131. Summary of interviews with all block coordinators.

132. Interview with LTC Christopher Jenson, CAL, Ft. Leavenworth, Kansas, 15 October 1990.

133. Clausewitz, p. 341.

134. This quote was taken from a note from BG Miller to the author after his review of the initial command process model, Fort Leavenworth, Kansas, 14 November 1990.

135. COL Samuel H. Hays and COL William N. Thomas, ed. Taking Command: The Art and Science of Military Leadership. (Harrisburg, Pennsylvania: Stackpols Books, 1967). p. 75.

136. Ibid, summary from pages 75-85.

137. Some examples include previous references Clausewitz, p. 102, Depuy, p. 21.

138. Clausewitz, p. 102.

139. Depuy, p. 21.

140. Interview, GEN Foss.

141. U.S. Department of the Army, Operations, Field Manual 100-5. (Washington, D.C.: Government Printing Office, 1982), p. 2-7.

142. Depuy, p. 18-19.

143. Morris, p. 368.

144. FM 22-103, Leadership and Command at Senior Levels, p. 42-45.

145. Foss, p. 5.

146. These terms and their definitions were provided by MAJ Jerry Traynham, block coordinator, OCA, in an interview conducted on 10 October 1990.

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